

REMARKS

The Office Action of June 2, 2004 has been received and its contents carefully noted.

The present Amendment corrects the informality in claim 8 that is noted in section 2 of the Office Action.

The present Amendment also revises claim 1 to further distinguish the invention from the cited references. Specifically, the "detecting" step of claim 1 has been revised to refer to "differential" data signals, and the "selecting" step has been revised to recite that the selection is "based at least in part on whether differential data signals having a valid common mode voltage level are detected." These revisions in claim 1 are supported (for example) by Figure 2 of the application's drawings, which show that differential data signals 20 are supplied to both a signal detector 40 and a data receiver 50. The signal detector 40 produces an output signal SIGDET 45 depending on whether the input signals have a valid common mode (see page 9 of the application, lines 6-12). The signal SIGDET, together with a hard BIST signal EBIST and a soft BIST signal SBIST (see page 7, lines 5-12), are supplied to a logic block 70 that outputs a selection signal to a multiplexer 80. An example of how the logic in block 70 can be implemented is shown in the truth table at the bottom of page 8 and top of page 9 of the application. Accordingly, it will be apparent that the selection made by multiplexer 80 in Figure 2 is based at least in part on whether differential data signals having a valid common mode voltage level are detected.

The Office Action rejects independent claim 1 (along with dependent claim 2) for obviousness on the basis of Schneider in view of Kang. Referring to Schneider's Figure 5

(the same figure that is reproduced on the cover page of the reference), the Office Action takes the position that Schneider discloses detecting whether the external data signal includes a data signal having a valid common mode voltage level. Applicants respectfully disagree. Although the Schneider reference does not specifically state the nature of Schneider's external data signals, it does state that they are ten bit characters that are transmitted over a ten bit wide parallel data bus (see column 6 of the reference, lines 46-51). An ordinarily skilled person would likely conclude that each conductor of Schneider's bus carries a single bit, depending on whether the associated conductor is at the logically high voltage or logically low voltage. That is, an ordinarily skilled person would have no reason to think that Schneider's input signals are differential signals, of the type which might have a common mode characteristic. The reference does not appear to even mention a common mode voltage level, and it is not at all clear that the concept is even meaningful in the context of the ordinary digital signals that the reference appears to employ.

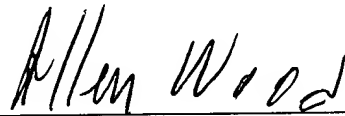
Furthermore, claim 1 now provides that the selection of either external data signals or test signals is "based at least in part on whether differential data signals having a valid common mode voltage level are detected." Since Schneider's data signals are not differential data signals, the reference is necessarily missing the "selecting" step of claim 1. Furthermore, the reference advises that the selection made by Schneider's multiplexer 35 is based on a MODE signal (see column 8, lines 42-47), and nothing in the reference would have linked Schneider's MODE signal, in the mind of an ordinarily skilled person, to the presence or absence of a valid common mode voltage level. The reference simply says that "MODE is an external signal, typically asserted via controller

circuitry operating under software or firmware program control, in response to certain predetermined conditions" (column 7, lines 30-33).

Since claim 2 depends from claim 1 and recites additional limitations to further define the invention, it is patentable along with claim 1 and need not be further discussed.

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowance. Reconsideration of the application is therefore respectfully requested.

Respectfully submitted,

A handwritten signature in cursive script that reads "Allen Wood". The signature is written in dark ink and is positioned above a horizontal line.

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